U.S. Department of the Interior
Bureau of Land Management
Ely Field Office

Moriah Herd Management Area
Wild Horse Gather Plan
and Preliminary Environmental Assessment

NV-040-04-015

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I. Background Information

The Bureau of Land Management (BLM) is proposing to remove excess wild horses from the Moriah Herd Management Area (HMA) in summer 2004, to restore the range to a thriving natural ecological balance and prevent deterioration.

The Moriah HMA is located 48 miles northeast of Ely, within White Pine County, Nevada. The HMA is 53,417 acres in size, and the eastern boundary of the HMA is the Nevada/Utah state line (Figure 1). Utah does not manage for wild horses on it's side of the state line, and has no HMA's in the area.

The appropriate management level (AML) of wild horses within the Moriah HMA was established in November, 2003, at 1-29 wild horses (refer to EA #NV-040-03-036). Prior to this AML was not established. The AML was established based on in-depth analysis of habitat suitability and monitoring data. As discussed in EA #NV-040-03-036, the AML is the number of wild horses which can graze without damage to the range.

Monitoring data collected for the HMA highlights that utilization by wild horses is moderate to heavy in established key areas. Trampling damage by wild horses is also evident at most locations, including riparian areas. Excess utilization and trampling in key areas is currently impacting range conditions and preventing recovery of key sites. Wild horses are routinely moving outside the HMA, and have been observed even further from the HMA than ever before.

The Moriah HMA has never been gathered to remove excess wild horses, but the Fillmore BLM Field Office in Utah has removed wild horses that have drifted outside the Moriah HMA into Utah. In 1988 42 wild horses were removed from Utah BLM's Partoun Allotment, and in 1995 51 head were removed. The HMA was aerially censused in 1998 with the population estimated at 122 head, in 2002 109 wild horses were censused (but wild horses outside the HMA in Utah were not counted), and again in 2003 with 251 counted. Based on population census, the average annual population increase for the Moriah HMA is approximately 20 percent. The current estimated wild horse population is 301 head.

A. Need for the Proposed Action

BLM has determined that there are excess wild horses present and the Proposed Action is needed in summer 2004 to remove excess wild horses and to restore wild horse herd numbers to levels consistent with the Appropriate Management Level (AML) for the HMA.

Vegetation monitoring in relation to use by wild horses in the HMA has determined that current wild horse population levels are exceeding the range's capacity to sustain wild horse use over the long term. Resource damage is occurring and is likely to continue to occur without immediate action. The area has experienced five years of drought and wild horses are moving outside the HMA into Utah. The proposed capture and removal is needed at this time in order to achieve

Figure 1. Location of Moriah HMA

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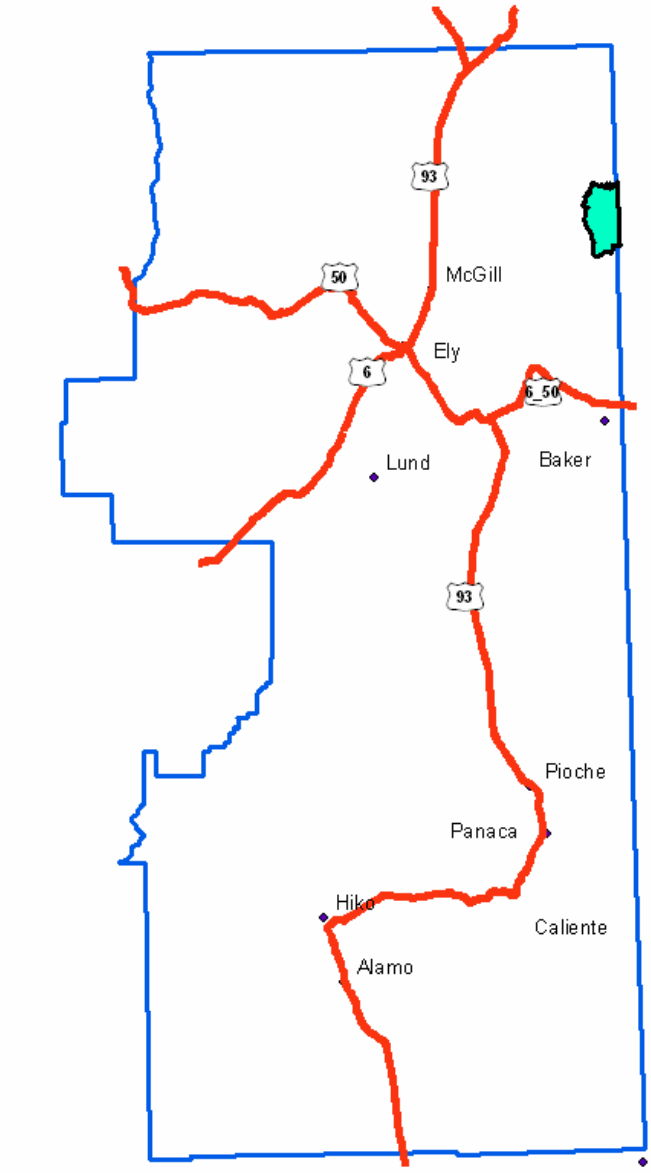

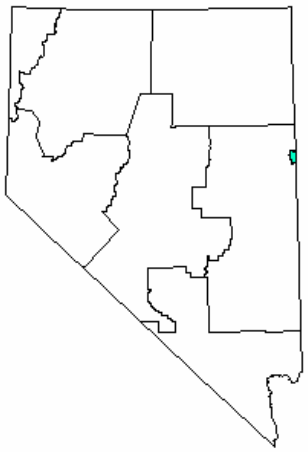

Legend

Moriah HMA

Highways

FEDERAL

Cities

Ely BLM District

N

Miles

0 5 10 20 30 40

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a thriving natural ecological balance between wild horse populations, wildlife, livestock, and vegetation, to improve watershed health, make "significant progress towards achievement" of Northeastern Great Basin Resource Advisory Council (RAC) Standards for rangeland health, and to protect the range from the deterioration associated with overpopulation of wild horses as authorized under Section 3(b) (2) of the 1971 Free-Roaming Wild Horses and Burros Act and Section 302(b) of the Federal Land Policy and Management Act of 1976.

B. Relationship to Planning

The Proposed Action is subject to the Schell Management Framework Plan (MFP), Schell Grazing Environmental Impact Statement (EIS), and subsequent Record of Decision (ROD) dated 1983. The proposed wild horse gather is in conformance with the Schell MFP as required by regulation (43 CFR 1610.5-3(a)). The proposed action is in conformance because it is clearly consistent with the goals and objectives of the approved land use plan.

The Moriah Herd Area was designated as a Herd Management Area in the Schell MFP. Currently the Ely Field Office is in the process of writing a new Resource Management Plan which will analyze the appropriateness of managing for wild horses in the Moriah HMA.

The proposed action is in conformance with all applicable regulations at 43 CFR (Code of Federal Regulations) 4700 and policies. The proposed action is also consistent with the Wild Free Roaming Horse and Burro Act of 1971, which mandates the Bureau to "*prevent the range from deterioration associated with overpopulation*", and "*remove excess horses in order to preserve and maintain a thriving natural ecological balance and multiple use relationships in that area".* Additionally, Promulgated Federal Regulations at Title 43 CFR 4700.0-6 (a) state "*Wild horses shall be managed as self-sustaining populations of healthy animals in balance with other uses and the productive capacity of their habitat* (emphasis added)." It is also consistent with the Strategic Plan for Management of Wild Horses and Burros on Public Lands, dated June 1992, which states, *"Provide for management of Wild Horse and Burro populations through a variety of techniques that may be used singly or in combination to ensure habitat is maintained and animals living on the land are in concert with the natural ecosystem and other users of the land."*

In addition, it is consistent with the Northeastern Great Basin RAC Standards for Rangeland Health. The action is consistent with local plans to the maximum extent possible. It is consistent with federal, state, and local laws; federal regulations, and Bureau policy.

C. Issues

The two issues identified are the proper management of wild horses within the established boundaries of an HMA and maintaining rangeland health.

II. Description of the Proposed Action and Alternatives

A. Proposed Action – Remove Wild Horses in excess of AML within the HMA, and all wild horses outside the HMA

The Proposed Action is to capture and remove all wild horses living outside the HMA, and to remove all wild horses in excess of AML within the HMA through a "gate cut." In a gate cut, all wild horses caught are removed. Approximately 150 wild horses are currently living outside the HMA, and the BLM would attempt to capture and remove all of those wild horses. Of the 150 living within the HMA, the BLM would attempt to capture and remove all those in excess of AML. The capture would continue within the HMA until enough wild horses are caught to achieve AML. If AML cannot be achieved due to the contractor not being able to capture any more wild horses, gather operations would cease. The BLM would also determine sex, age and color of the wild horses captured, acquire blood samples, and assess herd health (pregnancy, parasite loading, physical condition, etc).

Multiple capture sites (traps) may be used to capture wild horses from the HMA. Whenever possible, capture sites would be located in previously disturbed areas. All capture and handling activities (including capture site selections) will be conducted in accordance with Standard Operating Procedures (SOPs) described in Attachment 1. Capture techniques would be the helicopter-drive trapping method and/or helicopter-roping from horseback.

B. No Action Alternative – Continuation of Existing Management

The No Action Alternative is required by National Environmental Policy Act (NEPA) analysis to provide a baseline for impact analysis.

Under this alternative a wild horse gather would not take place immediately in the Moriah HMA. There would be no active management to control the size of the wild horse population at this time. The current population of 301 wild horses would continue to increase at a rate of 18-25% annually and would be allowed to regulate their numbers naturally through predation, disease, and forage, water and space availability. Existing management, including monitoring, would continue.

The No Action Alternative would violate the Wild Free Roaming Horse and Burro Act, federal regulations and Bureau policy. The Wild Horse and Burro Act of 1971 mandates the Bureau to prevent the range from deterioration associated with overpopulation, and preserve and maintain a thriving natural ecological balance and multiple use relationships in that area. In addition, the No Action Alternative would not comply with the Northeastern Great Basin RAC Standards and Guidelines for Rangeland Health and Healthy Wild Horse and Burro Populations. It is inconsistent with the Strategic Plan for Management of Wild Horses and Burros on Public Lands.

C. Alternatives Considered But Eliminated From Detailed Analysis

One alternative considered was to gather 100% of the population (301 wild horses), implement selective removal criteria by sorting all wild horses by age, and release 1 wild horse (the low end of AML). This was eliminated because it is not feasible. Gathering the entire herd has shown to

be impossible in the past and the BLM would not expect to be able to accomplish this now given the thick trees and rough topography in the area.

A second alternative considered was to gather wild horses, implement the selective removal criteria by sorting all wild horses by age, and releasing back into the HMA 29 wild horses (the high end of AML). This was eliminated because it would not be possible to gather 100% of the population, and without gathering greater than 96 percent of the wild horses, we would not be able to release any wild horses back into the HMA without exceeding the carrying capacity of the range. With releasing the high end of AML, the HMA would also maintain a thriving ecological balance for only one year, and gathering every year is not feasible. This would not meet the need of the proposed action to achieve a thriving ecological balance. Further, some of the wild horses that were captured outside the HMA and sorted for release would immediately return to their previous areas outside the HMA. Wild horses outside the HMA would not meet the need of the proposed action to properly manage for wild horses within HMA boundaries. This action would also disrupt the social herd structure of the wild horses released.

Also considered was to implement fertility control on all or a portion of the mares released, in conjunction with capturing as much of the entire population as possible. This was also eliminated because of the difficulty in capturing a majority of the entire population, and fertility control treatment on such a small number of wild horses would not be feasible or cost-effective.

III. Affected Environment

Table 1 below summarizes which of the critical elements of the human environment and other resources of concern within the project area are present, not present or not affected by the proposed action.

Table 1.
Summary of Critical and Other Elements of the Human Environment

Element	Present	Not Present or Not Affected	Element	Present	Not Present or Not Affected
Air Quality		X	Threatened or Endangered Species		X
Areas of Critical Environmental Concern		X	Vegetation	X	
Cultural Resources	X		Visual Resource Management		X
Environmental Justice		X	Wastes, Hazardous and Solid		X
Floodplains		X	Water Quality (surface or ground)		X
Invasive, Non-	X		Wetlands and Riparian	X	

native Species			Areas		
Migratory Birds	X		Wild and Scenic Rivers		X
Native American Religious Concerns		X	Wild Horses	X	
Prime or Unique Farmlands		X	Wildlife	X	
Soils	X		Wilderness		X

IV. Environmental Consequences

The following critical or other elements of the human environment are present and may be affected by the Proposed Action or the alternative. The affected environment is described for the reader to be able to understand the impact analysis.

A. Wild Horses

Affected Environment

The Moriah HMA's eastern boundary is also the state line between Utah and Nevada. Wild horses routinely live outside the HMA in Utah and Nevada, and many more move down into the lower elevations of Utah during the winter. The current estimated population based on census completed June, 2003, is 301 wild horses. Of the 251 wild horses counted during the 2003 census, nearly half (75 wild horses Utah, and 44 wild horses in Nevada) were living outside the HMA. Many more were right on the Utah/Nevada state line, and move outside the HMA daily. It is currently estimated that half of the population is living inside the HMA, and half is living outside the HMA. Wild horses have been observed even further from the HMA than ever before. The current population is 10.4 times the high end of AML, which is the maximum number of wild horses that the rangeland can sustain while maintaining a thriving natural ecological balance with multiple uses.

Environmental Impacts

Proposed Action – Based on past gather experience within the Ely District and the topography of the area, it is expected that the BLM will be able to capture 85 percent of the herd. The rougher topography and thicker-treed areas are within the HMA boundaries, while the open, gentler-sloped flats are lower in elevation and are more common outside the HMA. This would make it easier to capture wild horses outside the HMA, and the expected capture rate within the HMA may end up being lower than 85 percent. Every attempt would be made to capture and remove all wild horses living outside the HMA. If 85 percent of the wild horses are captured, it is expected that 22 wild horses would remain within the HMA.

Gathering wild horses causes impacts to individual animals. These impacts may occur as a result of handling stress associated with the gather, capture, processing, and transportation of animals. The intensity of these impacts varies by individual and is indicated by behaviors ranging from nervous agitation to physical distress. Mortality to individuals from this impact is infrequent but does occur in one half to one percent of wild horses captured in a given gather. Other impacts to individual wild horses include separation of members of individual bands of wild horses and removal of animals from the population.

Indirect impacts can occur to horses after the initial stress event, and may include increased social displacement, or increased conflict between studs. These impacts are known to occur intermittently during wild horse gather operations. Traumatic injuries may occur, and typically

involve biting and/or kicking bruises, which don't break the skin. The occurrence of spontaneous abortion events among mares following capture is very rare.

Population-wide impacts to individual bands of wild horses would be minimized with this action because all horses caught would be removed. The remaining wild horses not captured would maintain their social structure and herd demographics (age and sex ratios). No observable effects to the remaining population associated with the gather impacts would be expected except a heightened shyness toward human contact.

Population modeling was completed for the proposed action in order to determine future herd demographics and population growth. Impacts of having an AML of 1 to 29 wild horses were analyzed in EA #NV-040-03-036. Modeling indicates that the average wild horse population growth rate of the median of 100 trials should be 15% over four years. The average population size of the median of 100 trials would be 122 wild horses at the end of four years. Modeling also indicates that the population after the gather would be 45 wild horses, and would not put the population at risk of catastrophic loss or "crash". Modeling out to 10 years also shows that it will take two gathers to be able to reach AML (Appendix II).

Implementation of this action would reduce the wild horse population within AML. This would ensure that the remaining wild horses are healthy and vigorous, and not at risk of death due to insufficient habitat. This would also be in compliance with the Wild Free Roaming Horse and Burro Act, Resource Advisory Council Standards and Guidelines, and land use plan management objectives. Risks to the health of the rangelands by exceeding the carrying capacity of the range, and risks to the health of the horse herds would be minimized. Horses would not be at risk of death by starvation and lack of water due to unpredictable weather patterns. Fighting among stud horses would decrease since they would protect their position at scarce water sources less frequently, as well as injuries and death to all age classes of animals. As populations are managed within capacity of the habitat, bands of horses would be less likely to leave the boundaries of the HMA seeking forage and water, which in turn may put them at risk in new and unfamiliar country.

No Action Alternative –Under this alternative, wild horses would not be removed from the Moriah HMA at this time. The horses would not be subject to any individual direct or indirect impacts described in the Proposed Action as a result of a gather operation. The current population of 301 wild horses would continue to increase at rates of 18 to 25 percent per year. Wild horses are a long-lived species with documented survival rates exceeding 92% for all age classes. Predation and disease do not substantially regulate wild horse population levels. This would lead to a steady increase in wild horse numbers, which would continue to exceed the carrying capacity of the range. Consequences of exceeding the established AML and the carrying capacity of the range would be increased risk to the health of the rangelands, and risk to horse herd health. Individual horses would be at risk of death by starvation and lack of water. The population of wild horses would compete for the available water and forage resources, affecting mares and foals most severely. Social stress would increase. Fighting among stud horses would increase as they protect their position at scarce water sources, as well as injuries and death to all age classes of animals. The areas closest to the water would experience severe utilization and

degradation. Over time, the animals would deteriorate in condition as a result of declining forage availability and the increasing distance traveled to forage. Many horses, especially foals and mares, would likely die through the winter if average snowfall levels are received. As populations increase beyond the capacity of the habitat, more bands of horses will leave the boundaries of the HMA seeking forage and water, which in turn may put them at risk in new and unfamiliar country. The health of the wild horse herd population would be reduced, the condition of the range would deteriorate, and other range users would be impacted.

The average of 100 population modeling trials indicates that if the current wild horse population continues to grow without a removal the median population size would be 434 wild horses at the end of four years. Modeling indicates the average growth rate is expected to be a 14.5% annual increase (Appendix II).

B. Vegetation, Soils and Riparian/Wetland Areas

Affected Environment

Vegetation within the HMA varies with elevation. Along the valley bottoms, salt desert shrub species can be found. However, the more common shrub specie is sagebrush. As you move up into the foothills, sagebrush gives way to pinyon-juniper woodlands. At the highest elevations, mountain mahogany and mountain sagebrush dominate, with small pockets of aspen and fir trees. Small riparian areas and their associated plant species occur throughout the HMA near seeps and springs. Riparian areas are currently experiencing trampling damage from the over-population of wild horses. Monitoring data collected for the HMA highlights that utilization by wild horses is moderate to heavy in established key areas. Trampling damage by wild horses is also evident at most locations, including riparian areas. Upland sites are also being damaged from wild horse overgrazing. The area outside the HMA in Utah is lower elevation sagebrush vegetation, with several small riparian areas. This area is also being impacted through increased grazing utilization by wild horses. Excess utilization and trampling in key areas is currently impacting range conditions and preventing recovery of key sites.

Environmental Impacts

Proposed Action – Implementation of the proposed action would eliminate wild horses (if all could be caught) from outside the Moriah HMA, and reduce the wild horse population within the HMA to within AML. Impacts to vegetation with implementation of the Proposed Action could include disturbance of native vegetation immediately in and around temporary trap sites, and holding and processing facilities. Impacts could be by vehicle traffic and the hoof action of penned horses, and could be locally severe in the immediate vicinity of the corrals or holding facilities. Generally, these activity sites would be small (less than one half acre) in size. Since most trap sites and holding facilities would be re-used during recurring wild horse gather operations, any impacts would remain site-specific and isolated in nature. In addition, most trap sites or holding facilities are selected to enable easy access by transportation vehicles and logistical support equipment and would generally be adjacent to or on roads, pullouts, water haul

sites, or other flat spots that were previously disturbed. By adhering to the SOPs, adverse impacts to soils would be minimized.

Removing excess wild horses would make progress towards achieving a "thriving natural ecological balance." It would reduce stress on vegetative communities, and be in compliance with the Wild Free Roaming Horse and Burro Act, Resource Advisory Council Standards and Guidelines, and land use plan management objectives. Vegetative resources, including riparian areas, would improve with the reduced population. Vegetative species would not experience over-utilization by wild horses, which would lead to healthier, more vigorous forage plants. This would result in an increase in forage availability, vegetation density, reproduction, and productivity.

Impacts of hoof action on the soil around unimproved springs and stream banks would be lessened, which should lead to increased stream bank stability and improved riparian habitat conditions. There would also be a reduction in hoof action on upland habitats and reduced competition for available water sources.

No Action Alternative - The severe localized trampling associated with trap sites would not occur, however, as wild horse populations continue to grow, soil erosion would increase throughout the HMA and in areas outside the HMA where wild horses are living. Increased horse use throughout the HMA would adversely impact soils and vegetation health, especially around the water locations. As native plant health deteriorates and plants are lost, soil erosion would increase. The shallow soils typical of this region cannot tolerate much loss without losing productivity and thus the ability to be re-vegetated with native plants. Invasive, non-native plant species would increase and invade new areas following increased soil disturbance and reduced native plant vigor and abundance. This would lead to both a shift in plant composition towards weedy species and an irreplaceable loss of topsoil and productivity from erosion. These impacts would also be seen outside the HMA, and could reach even larger geographic areas as wild horses forage further from the HMA.

C. Wildlife, Special Status Species, and Migratory Birds

Affected Environment

Wildlife in the area includes antelope, mule deer, Rocky Mountain Elk, and other wildlife species common to the Great Basin environment. Migratory birds can be found in all habitat types located within the HMA. The migratory bird nesting season is from May 15 through July 31. No surface disturbing activity can be conducted during this time period without a nesting bird survey of the proposed project area. The sage grouse is a State of Nevada and BLM sensitive species. The United States Fish and Wildlife Service (USFWS) has received seven petitions to list the bird as threatened or endangered range-wide. There are three known sage grouse leks (strutting grounds) within the boundaries of the HMA. All three leks are active with strutting males and hen attendance. Bald eagles, a threatened species, is a winter resident of this area of Nevada and can be observed form November thru May.

Environmental Impacts

Proposed Action – Trap sites would not be located on sage grouse leks. If a trap or camp site is to setup prior to July 31, a migratory bird breeding survey will be conducted prior to setup, and any areas with nesting migratory birds would be avoided. Wildlife adjacent to trap sites would be temporarily displaced during capture operations by increased activity of trap setup, helicopters and vehicle traffic. Reduction of wild horse numbers would result in reduced competition between wild horses and wildlife as soon as the gather is completed. This would result in improved habitat conditions by increasing forage availability and quality. In addition, it would reduce competition between wild horses and wildlife for available forage and water resources. Disturbance associated with wild horses along stream bank riparian habitat and adjacent upland habitat would be reduced.

No Action Alternative – Wildlife would not be temporarily displaced or disturbed under the no action alternative. There would be continued competition with wild horses for water and forage resources. This competition would increase as wild horse numbers increased annually. Wild horses are aggressive around water sources, and some wildlife species may not be able to compete. The competition for resources may lead to increased stress and possible dislocation or death of native wildlife species.

D. Livestock

Affected Environment

The Moriah HMA includes portions of the Indian George, Mallory Springs, Tippet, Mill Springs, and Pleasant Valley livestock grazing allotments (Figure 2). Permitted livestock grazing use in the Mallory Spring, Pleasant Valley, and Tippet allotment includes cattle summer grazing. The Indian George allotment has winter sheep use, but the northern portion of the allotment has not been used during the last several years due to wild horse overpopulation. The Mill Spring allotment has summer and fall permitted cattle use, but was not used last year, and will probably be rested again this year. Livestock grazing also occurs in areas immediately adjacent to the HMA.

Environmental Impacts

Proposed Action – Livestock located near gather activities would be disturbed by the helicopter and the increased vehicle traffic during the gather operation. This displacement would be temporary; and the livestock would move back into the area once gather operations moved. Past experience has shown that gather operations have little impacts to grazing cattle. A reduction of wild horses to AML would result in an increase in forage availability and quality, improved habitat condition, and reduced competition between livestock and wild horses for available forage and water resources. No increases in permitted livestock use would occur as a result of the proposed action.

No Action Alternative – Livestock would not be displaced or disturbed due to gather operations under the No Action Alternative, however, there would be continued competition with wild horses for water and forage resources. As horse numbers increase, livestock grazing within the HMA may be reduced to prevent further deterioration of the range. Livestock grazing outside the HMA would continue to be impacted by wild horses that leave the HMA. This impact would spread even further as wild horses expand their range in search of forage and living space.

Figure 2. Allotments within Moriah HMA

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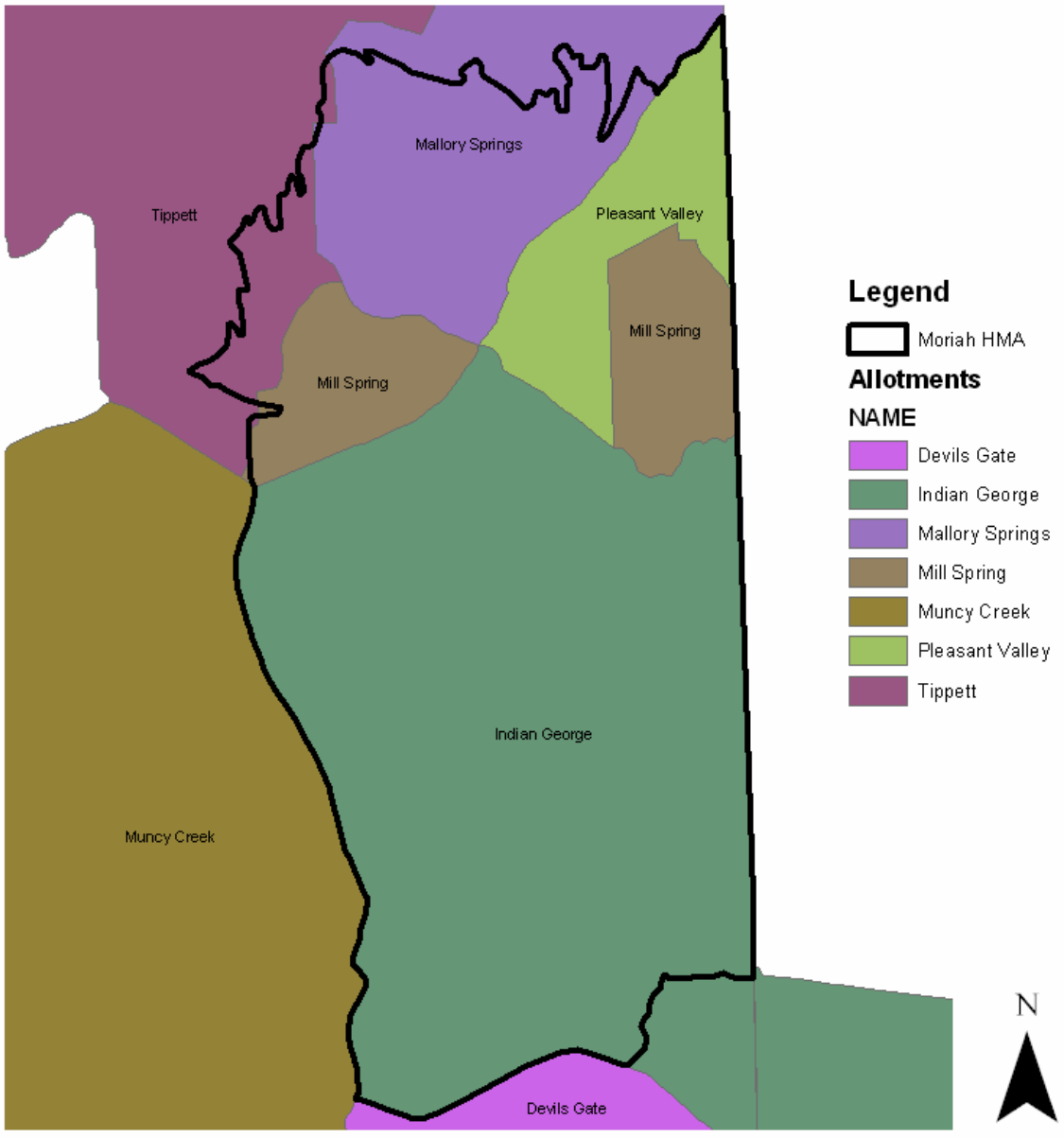

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E. Noxious Weed and Invasive Non-Native Species

Affected Environment

The Moriah HMA has not been inventoried for noxious weeds, however, saltcedar has been reported in two locations within the HMA.

Environmental Impacts

Proposed Action – The proposed gather may spread existing noxious weed species. This could occur if vehicles drive through infestations and spread seed into previously weed-free areas. The contractor together with the contracting officer's representative or project inspector (COR/PI) would examine proposed trap sites and holding corrals prior to construction. If noxious weeds were found, the location of the facilities would be moved. Any off-road equipment that has been exposed to weed infestations would be cleaned before moving into relatively weed free areas. All trap sites, holding facilities, and camping areas on public lands would be monitored during the next several years. Despite short-term risks, with the reduction in wild horse numbers, and the subsequent recovery of the native vegetation, fewer disturbed sites would be available for non-native plant species to invade.

No Action Alternative – Under this alternative, the wild horse gather would not take place at this time. The likelihood of noxious weeds being spread by gather operations would not exist. However, continued overgrazing of the present plant communities could lead to an expansion of noxious weeds and invasive non-native species.

F. Cultural Resources

Affected Environment

A cultural resources survey of the HMA has not occurred.

Environmental Impacts

Proposed Action – No impacts to cultural resources are anticipated to occur since all trap sites and holding facilities would be inventoried for cultural resources prior to set-up. An archaeologist would review all proposed trap sites and facility locations (new and previously used locations) to determine if these locations have had a cultural resources inventory, and/or if a new inventory is required (Cultural Resources Needs Assessment NV-8100-9). This review by the archaeologist, which does not normally include fieldwork, will be documented in the Needs Assessment. A District Archeological Technician (DAT) will be on-site during the gather to perform any needed cultural resources inventories. If cultural resources are encountered at proposed trap site(s) or holding facility location(s), those location(s) would not be utilized unless it could be modified to avoid impacts to cultural resources. With reduced horse numbers, there would be less hoof action around riparian spring areas where many cultural resources are found. This could lead to decreased damage to cultural resources by wild horses.

No Action Alternative - Under this alternative, the wild horse gather would not take place and therefore, no trap sites or holding facilities would be constructed. There would be no possibility that cultural resources would be damaged as a result of horse gather operations, however, high numbers of wild horses could cause damage to cultural resources due to trampling, especially around water sources, where the occurrence of cultural resources is often high.

V. Cumulative Impacts

Cumulative impacts are impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. The area of cumulative impact analysis is the Moriah HMA and areas immediately adjacent to it.

According to the 1994 BLM *Guidelines For Assessing and Documenting Cumulative Impacts*, the cumulative analysis should be focused on those issues and resource values identified during scoping that are of major importance. Accordingly, the issues of major importance that are analyzed are maintaining rangeland health and proper management of wild horses within the established boundaries of an HMA.

Past Actions

Herd Areas were identified in 1971 as areas occupied by wild horses. The HMAs were established in the late 1980s through the land use planning process as areas where wild horse management was a designated land use. Since the mid-1980s, AMLs have been established on the Ely BLM District HMAs.

The BLM also moved to long range planning with the development of the Caliente Grazing EIS, the Schell Grazing EIS and the Egan RMP/EIS. These EISs analyzed impacts of the Land Use Plan's management direction for grazing and wild horses, as updated through Bureau policies, Rangeland Program direction, and Wild Horse Program direction. Forage was allocated within the allotments for livestock use and range monitoring studies were initiated to determine if allotment objectives were being achieved, or that progress toward the allotment objectives was being made.

Due to these laws and subsequent court decisions, integrated wild horse management has occurred in the Moriah HMA. An Appropriate Management Level determination for the Moriah HMA was established through a 2003 Wild Horse Decision. AML was established at 1 to 29 wild horses in order to achieve a "thriving natural ecological balance".

Similarly, adjustments in livestock season of use, livestock numbers, and grazing systems were made through the allotment evaluation/MUD process. In addition, temporary closures to livestock grazing in areas burned by wildfires, or due to extreme drought conditions, were implemented to improve range condition.

The Northeastern Great Basin Resource Advisory Council (RAC) developed standards and guidelines for rangeland health that have been the basis for managing wild horse and livestock grazing within the Ely District. Adjustments in numbers, season of use, grazing season, and allowable use are based on evaluating progress toward reaching the standards.

Present Actions

Today the Moriah HMA has an estimated population of 301 wild horses. Resource damage is occurring due to this excess of animals and wild horses are moving into non-HMA areas. Current BLM policy is to conduct removals targeting portions of the wild horse population based upon age, and allowing the correction of any sex ratio problems that may occur. Further, the BLM is mandated to conduct gathers in order to facilitate a four-year gather cycle. Program goals have expanded beyond establishing a "*thriving natural ecological balance*" (by setting appropriate management level (AML)) for individual herds, to include achieving and maintaining healthy, viable, vigorous, and stable populations.

Current mandates prohibit the destruction of healthy animals that are removed or deemed to be excess. Currently only sick, lame, or dangerous animals can be euthanized, and destruction is no longer used as a population control method. This has led to gather intervals that are longer than the desired four years due to a lack of facility space and funding.

Today public interest in the welfare and management of wild horses is currently higher than it has ever been. Many different values pertaining to wild horse management form current wild horse perceptions. Wild horses are viewed as nuisances, as well as living symbols of the pioneer spirit.

The Ely BLM has also modified grazing permits and conducted vegetation treatments to improve watershed health. Currently within the Moriah HMA there is sheep and cattle livestock grazing use occurring on a yearly basis.

The focus of wild horse management has also expanded to place more emphasis on achieving rangeland health as measured through the RAC standards and guidelines

Reasonably Foreseeable Future Actions

In the future, the BLM would manage wild horses within HMAs that have suitable habitat for a population range of AML, while maintaining genetic diversity, age structure, and sex ratios. Current policy is to express all future wild horse AMLs as a range, to allow for regular population growth, as well as better management of populations rather than individual HMAs. The Ely BLM District is in the process of writing a new Resource Management Plan that will analyze AMLs expressed as a range, as well as eliminating wild horse HMAs where the habitat will not support viable herds. Future wild horse management would focus on an integrated ecosystem approach with the basic unit of analysis being the watershed. Wild horses would continue to be a component of the public lands, managed within a multiple use concept.

While there is no anticipation that there will be amendments to the Wild and Free-Roaming Horse and Burro Act that would change the way wild horses could be managed on the public lands, the Act has been amended twice since 1971. Therefore, there is potential for an amendment as a reasonably foreseeable future action. However, if changes in the Act that relate to the disposal of excess wild horses or sanctuaries outside of the United States are authorized; gathers and removals should become more predictable due to facility space. This should increase stability of gather schedules, which would result in the Moriah HMA being gathered every four years. Fertility control should also become more readily available as a management tool, with treatments that last between gather cycles, reducing the need to remove as many wild horses. If there are no future amendments to the Act, and no changes in funding levels for the wild horse program, then few changes in on-the-ground management would occur.

An Ely BLM District Resource Management Plan, which includes Great Basin Restoration, has been initiated and is scheduled to be completed in 2005. Wild horse management for the Ely BLM District will be addressed on a programmatic basis. In the Moriah HMA wild horse management would be analyzed to determine if it is appropriate as one of the multiple uses of the public lands. Setting the AML at zero and eliminating wild horse use from the Moriah HMA due to poor habitat suitability would also be analyzed. The Ely Field Office would continue to conduct monitoring to assess progress toward meeting rangeland health standards.

Impacts

Past actions regarding the management of wild horses have resulted in the current wild horse population within the Moriah HMA. Wild horse management has contributed to the present resource condition and wild horse herd structure within the gather area.

The combination of the past, present, and reasonably foreseeable future actions, along with the proposed action, should result in more stable wild horse populations, healthier rangelands, healthier wild horses, and fewer multiple-use conflicts within and adjacent to the Moriah HMA.

VI. Mitigation Measures and Suggested Monitoring

Weed detection would be incorporated into normal monitoring activities. The area will continued to be monitored for the detection of wild horses living outside HMA boundaries.

The proposed action incorporates proven standard operating procedures, which have been developed over time. These SOPs (Appendix I) represent the "best methods" for reducing impacts associated with gathering, handling, transporting and collecting herd data. Additional mitigation measures are not warranted.

VII. Consultation and Coordination

Public hearings are held annually on a state-wide basis regarding the use of helicopters and motorized vehicles to capture wild horses (or burros). During these meetings, the public is given

the opportunity to present new information and to voice any concerns regarding the use of these methods to capture wild horses (or burros). Additional consultation and coordination relative to the proposed action includes posting the proposed action on the BLM Ely Field Office's website (http://www.nv.blm.gov/ely/nepa/ea_list.htm) May 17th, and posting the full EA on May 24th for a 30 day public scoping period. The proposed action was to be presented at a Native American Consultation Meeting on May 19th, but due to low turnout, information describing the proposed action will be mailed to the Native American tribes. The Preliminary EA was mailed to the following list of people on May 21, 2004:

CC:	Certified No. Returned Receipt Requested
A.D. Ranching LLC	7003 1010 0002 9818 0408
Blue Diamond Oil Corporation	7003 0510 0001 2708 8249
George Eldridge and Sons, Inc	7002 0510 0001 2708 8232
Mike Podborny, NDOW	7002 0510 0001 2708 8225
Need More Sheep Co.	7002 0510 0001 2708 8218
Pleasant Valley Enterprises	7002 0510 0001 2708 8201
Thomas Rosevear	7002 0510 0001 2708 8195
Gracian Uhalde	7002 0510 0001 2708 8188
White River Ranch, LLC	7002 0510 0001 2708 8171
Dusty Youren	7002 0510 0001 2708 8164
Nevada State Clearinghouse	7002 0510 0001 2708 8157
Charles Baun, URS Corp	7002 0510 0001 2708 8140
Mr. Steven J. Carter, Carter Cattle Company	7002 0510 0001 2708 8133
Friends of Nevada Wilderness	7002 0510 0001 2708 8126
Steve Foree, NDOW	7002 0510 0001 2708 8119
The Fund For Animals	7002 0510 0001 2708 8102
Brad Hardenbrook, NDOW	7002 0510 0001 2708 8096
John McLain, Resource Concepts, Inc.	7002 0510 0001 2708 8089
Betsy Macfarlan, ENLC	7002 0510 0001 2708 8072
Katie Fite, Western Watersheds Project	7002 0510 0001 2708 8065
Mike Scott, NDOW	7002 0510 0001 2708 8058
Mr. Lucas J. Phillips, Ely Ranger District	7002 0510 0001 2708 8041
USFWS, Southern Nevada Field Office	7002 0510 0001 2708 8034
Jule Wadsworth	7002 0510 0001 2708 8027
Russel W. Peacock	7002 0510 0001 2708 8010
Mr. Jerry McGuire, White River Ranch, LLC	7002 0510 0001 2708 8003
Pineview Ranch	7002 0510 0001 2708 7990
Kathleen Bertrand**,** Turner & Irlbeck Ranch	7002 0510 0001 2708 7983
Tom Rosevear, Rosevear Ranches	7002 0510 0001 2708 7976
White River Ranch	7002 0510 0001 2708 7969
David Buhlig, Nevada Land & Resource Co	7002 0510 0001 2708 7952
Curt Baughman, NDOW	7002 0510 0001 2708 7945
White Pine Sportsmen	7002 0510 0001 2708 7938
Wade Robison, W.P. Co. Wildlife Advisory Board	7002 0510 0001 2708 7921
Wild Horse Organized Assistance	7002 0510 0001 2708 7891

Mr. Jerry Millet, Tribal Manager	7002 0510 0001 2708 7884
Te-Moak Tribe of Western Shoshone	7002 0510 0001 2708 7877
Mr. David Pete, Chair Goshute Tribal Council	7002 0510 0001 2708 7860
National Mustang Association, Inc	7002 0510 0001 2708 7853
National Wild Horse Association	7002 0510 0001 2708 7846

Internal District Review

Jody Nartz	Wild Horses/Author
Jared Bybee	Wild Horses
Karen Prentice	Invasive, Non-Native Species
Steve Leslie	Wilderness Values
Carolyn Sherve-Bybee	Archeological/Historic/Paleontological
Paul Podborny	Migratory Birds, Special Status Species
Chris Hanefeld	Public Affairs
Jake Rajala	Environmental Coordination
Elvis Wall	Native American Religious Concerns/Tribal Coordination
Cody Coombs	Livestock

APPENDIX I

STANDARD OPERATING PROCEDURES

Gathers would be conducted by contractors or agency personnel. The same procedures for gathering and handling wild horses and burros apply whether a contractor or BLM personnel are used. The following stipulations and procedures will be followed to ensure the welfare, safety and humane treatment of the wild horses and burros (WH&B) in accordance with the provisions of 43 CFR 4700.

Gathers are normally conducted for one of the following reasons:

1. Regularly scheduled gathers to obtain or maintain the Appropriate Management Level (AML).

2. Drought conditions that could cause mortality to WH&B due to the absence of water or forage, and where continued grazing may result in a downward trend to the vegetative communities due to plant mortality and reduced vigor and productiveness.

3. Fires that remove forage to the extent that there is inadequate forage to sustain the population or to allow recovery of native vegetation.

4. Utilization levels that reach a point where a continued increase in utilization would cause a downward trend in the plant communities and impede meeting standards for rangeland health.

5. Monitoring indicates that WH&B use would begin to cause a downward trend in riparian function or not permit the recovery of riparian vegetation determined to be in undesirable condition.

A. Capture Methods used in the Performance of a Gather - Contract Operations

1. Helicopter - Drive Trapping

   Capture attempts may be accomplished by utilizing a helicopter to drive animals into a temporary trap. If this method is selected the following applies:

   a. A minimum of two saddle-horses shall be immediately available at the trap site to accomplish roping if necessary. Roping shall be done as determined by the BLM. Under no circumstances shall animals be tied down for more than one hour.

   b. The contractor shall assure that bands remain together, and that foals shall not be left behind.

c. A domestic saddle horse(s) may be used as prada (or "Judas") horse to lead the wild horses into the trap site. Individual ground hazers may also be used to assist in the gather.

2. Helicopter - Roping

Capture attempts may be accomplished by utilizing a helicopter to drive animals to ropers. If this method is selected the following applies:

a. Under no circumstances shall animals be tied down for more than one hour.

b. The contractor shall assure that bands remain together, and that foals shall not be left behind.

B. BLM Conducted Gather - Non-Contract Operations

1. Gather operations will be conducted in conformance with the Wild Horse and Burro Aviation Management Handbook (March 2000).

2. Two-way radio communication between the helicopter and the ground crew will be maintained at all times during the operation.

C. Safety and Communications

1. The Contractor shall have the means to communicate with the BLM and all contractor personnel engaged in the capture of wild horses and burros utilizing a VHF/FM Transceiver or VHF/FM portable Two-Way radio. If communications are ineffective the government will take steps necessary to protect the welfare of the animals.

a. The proper operation, service and maintenance of all contractor furnished property is the responsibility of the Contractor. The BLM reserves the right to remove from service any contractor personnel or contractor furnished equipment which, in the opinion of the BLM violate contract rules, are unsafe or otherwise unsatisfactory. In this event, the Contractor will be notified in writing to furnish replacement personnel or equipment within 48 hours of notification. All such replacements must be approved in advance of operation by the BLM.

b. The Contractor shall obtain the necessary FCC licenses for the radio system.

c. All accidents occurring during the performance of any delivery order shall be immediately reported to the BLM.

2. Should the helicopter be employed, the following will apply:

   a. The Contractor must operate in compliance with Federal Aviation Regulations, Part 91. Pilots provided by the Contractor shall comply with the Contractor's Federal Aviation Certificates, applicable regulations of the State in which the gather is located.

   b. Fueling operations shall not take place within 1,000 feet of the animals.

   c. At time of delivery order completion, the contractor shall provide the BLM with a completed copy of the Service Contract Flight Hour Report.

D. Trapping and Care

1. The primary concern of the contractor is the safe and humane handling of all animals captured. All capture attempts shall incorporate the following:

   a. All trap and holding facilities locations must be approved by the BLM prior to construction. The Contractor may also be required to change or move trap locations as determined by the BLM. All traps and holding facilities not located on public land must have prior written approval of the landowner.

   b. A cultural resources investigation by an archaeologist or an archaeological technician would be conducted prior to trap or holding facility construction. If cultural values are found, an alternative site would be selected.

   c. Prior to facility (temporary traps and holding corrals) construction, the proposed locations would be examined for the presence of noxious weeds. If it is determined that noxious weeds are present, the contractor would be instructed to locate the facilities elsewhere. The contractor and his personnel would also be instructed to avoid camping in or driving through noxious weed infestations.

2. The rate of movement and distance the animals travel shall not exceed limitations set by the BLM who will consider terrain, physical barriers, weather, condition of the animals and others factors.

3. All traps, wings, and holding facilities shall be constructed, maintained and operated to handle the animals in a safe and humane manner and be in accordance with the following:

a. Traps and holding facilities shall be constructed of portable panels, the top of which shall not be less than 72 inches high for horses and 60 inches for burros, and the bottom rail of which shall not be more than 12 inches from ground level. All traps and holding facilities shall be oval or round in design.

b. All loading chute sides shall be a minimum of 6 feet high and shall be fully covered with plywood (without holes) or like material.

c. All runways shall be a minimum of 30 feet long and a minimum of 6 feet high for horses, and 5 feet high for burros, and shall be covered with plywood, burlap, plastic snow fence or like material a minimum of 1 foot to 5 feet above ground level for burros and 1 foot to 6 feet for horses. The location of the government furnished portable restraining chute to restrain, age, or provide additional care for animals shall be placed in the runway in a manner as instructed by or in concurrence with the BLM.

d. All crowding pens including the gates leading to the runways shall be covered with a material which prevents the animals from seeing out (plywood, burlap, etc.) and shall be covered a minimum of 1 foot to 5 feet above ground level for burros and 2 feet to 6 feet for horses. Eight linear feet of this material shall be capable of being removed or let down to provide a viewing window.

e. All pens and runways used for the movement and handling of animals shall be connected with hinged self-locking gates.

4. No fence modifications will be made without authorization from the COR/PI. The Contractor/BLM shall be responsible for restoration of any fence modification.

5. When dust conditions occur within or adjacent to the trap or holding facility, the Contractor/BLM shall be required to wet down the ground with water.

6. Alternate pens, within the holding facility shall be furnished by the Contractor to separate mares or jennies with small foals, sick and injured animals, and estrays from the other animals. Animals shall be sorted as to age, number, size, temperament, sex, and condition when in the holding facility so as to minimize, to the extent possible, injury due to fighting and trampling. Under normal conditions, the government will require that animals be restrained for the purpose of determining an animal's age or other similar practices. In these instances a portable restraining chute will be provided by the government. Alternate pens shall be furnished by the Contractor to hold animals if the specific gathering requires the animals be

released back into the capture area(s). In areas requiring one or more satellite traps, and where a centralized holding facility is utilized, the Contractor may be required to provide additional holding pens to segregate animals transported from remote locations so they may be returned to their traditional ranges. Either segregation or temporary marking and later segregation will be at the discretion of the BLM.

7. The Contractor shall provide animals held in the traps and/or holding facilities with a continuous supply of fresh clean water at a minimum rate of 10 gallons per animal per day. Animals held for 10 hours or more in the traps or holding facilities shall be provided good quality hay at the rate of not less than two pounds of hay per 100 pounds of estimated body weight per day.

8. It is the responsibility of the Contractor/BLM to provide security to prevent loss, injury or death of captured animals until delivery to final destination.

9. The Contractor/BLM shall restrain sick or injured animals if treatment is necessary. A veterinarian may be called to make a diagnosis and final determination. Destruction shall be done by the most humane method available. Authority for humane destruction of wild horses (or burros) is provided by the Wild Free-Roaming Horse and Burro Act of 1971, Section 3(b)(2)(A), 43 CFR 4730.1, BLM Manual 4730 - Destruction of Wild Horses and Burros and Disposal of Remains, and is in accordance with BLM policy as expressed in Instructional Memorandum No. 98-141.

   Any captured horses that are found to have the following conditions may be humanely destroyed:

   a. The animal shows a hopeless prognosis for life.
   b. Suffers from a chronic disease.
   c. Requires continuous care for acute pain and suffering.
   d. Not capable of maintaining a body score of one.
   e. The animal is a danger to itself or others.

10. Animals shall be transported to final destination from temporary holding facilities within 24 hours after capture unless prior approval is granted by the BLM for unusual circumstances. Animals to be released back into the HMA following gather operations may be held up to 21 days or as directed by the BLM. Animals shall not be held in traps and/or temporary holding facilities on days when there is no work being conducted except as specified by the BLM. The Contractor shall schedule shipments of animals to arrive at final destination between 7:00 a.m. and 4:00 p.m. No shipments shall be scheduled to arrive at final destination on Sunday and Federal holidays, unless prior approval has been obtained by the BLM.

Animals shall not be allowed to remain standing on trucks while not in transport for a combined period of greater than three (3) hours. Animals that are to be released back into the capture area may need to be transported back to the original trap site. This determination will be at the discretion of the BLM.

11. The BLM will issue a Notice of Intent to Impound Unauthorized Livestock prior to all gathers. Branded or privately owned animals whose owners are known will be impounded by BLM, and if not redeemed by payment of trespass and capture fees, will be sold at public auction. If owners are not known, the private animals will be turned over to the State for Processing under Nevada estray laws.

E. Motorized Equipment

1. All motorized equipment employed in the transportation of captured animals shall be in compliance with appropriate State and Federal laws and regulations applicable to the humane transportation of animals. The Contractor shall provide the BLM with a current safety inspection (less than one year old) for all motorized equipment and tractor-trailers used to transport animals to final destination.

2. All motorized equipment, tractor-trailers, and stock trailers shall be in good repair, of adequate rated capacity, and operated so as to ensure that captured animals are transported without undue risk or injury.

3. Only tractor-trailers or stock trailers with a covered top shall be allowed for transporting animals from trap site(s) to temporary holding facilities, and from temporary holding facilities to final destination(s). Sides or stock racks of all trailers used for transporting animals shall be a minimum height of 6 feet 6 inches from the floor. Single deck tractor-trailers 40 feet or longer shall have two (2) partition gates providing three (3) compartments within the trailer to separate animals. Tractor-trailers less than 40 feet shall have at least one partition gate providing two (2) compartments within the trailer to separate the animals. Compartments in all tractor-trailers shall be of equal size plus or minus 10 percent. Each partition shall be a minimum of 6 feet high and shall have a minimum 5 foot wide swinging gate. The use of double deck tractor-trailers is unacceptable and shall not be allowed.

4. All tractor-trailers used to transport animals to final destination(s) shall be equipped with at least one (1) door at the rear end of the trailer which is capable of sliding either horizontally or vertically. The rear door(s) of tractor-trailers and stock trailers must be capable of opening the full width of the trailer. Panels facing the inside of all trailers must be free of sharp

edges or holes that could cause injury to the animals. The material facing the inside of all trailers must be strong enough so that the animals cannot push their hooves through the side. Final approval of tractor-trailers and stock trailers used to transport animals shall be held by the BLM.

5. Floors of tractor-trailers, stock trailers, and the loading chute shall be covered and maintained with wood shavings to prevent the animals from slipping.

6. Animals to be loaded and transported in any vehicle or trailer shall be as directed by the BLM and may include limitations on numbers according to age, size, sex, temperament, and animal condition. The following minimum square feet per animal shall be allowed in all trailers:

   11 sq. ft. per adult horse (1.4 linear ft. in an 8ft. wide trailer);
   6 sq. ft. per horse foal (.75 linear ft. in an 8ft. wide trailer).

7. Prior to any gathering operations, the BLM will provide for a pre-capture evaluation of existing conditions in the gather areas. The evaluation will include animal condition, prevailing temperatures, drought conditions, soil conditions, road conditions, and a topographic map with location of fences, other physical barriers, and acceptable trap locations in relation to animal distribution. The evaluation will determine the level of activity likely to cause undue stress to the animals, and whether such stress would necessitate a veterinarian be present. If it is determined that capture efforts necessitate the services of a veterinarian, one would be obtained before capture would proceed. The Contractor will be informed of all the conditions and will be given directions regarding the capture and handling of animals to ensure their health and welfare is protected.

8. If the BLM determines that dust conditions are such that animals could be endangered during transportation, the Contractor will be instructed to adjust speed.

9. Trap sites will be located to cause as little injury and stress to the animals, and as little damage to the natural resources of the area, as possible. Sites will be located on or near existing roads. Additional trap sites may be required, as determined by the BLM, to relieve stress caused by specific conditions at the time of the gather (i.e. dust, rocky terrain, temperatures, etc.).

F. Animal Characteristics and Behavior

Releases of wild horses would be near available water. If the area is new to them, a short-term adjustment period may be required while the wild horses become familiar with the new area.

G. Public Participation

It is BLM policy that the public will not be allowed to come into direct contact with wild horses or burros being held in BLM facilities. Only BLM personnel, or contractors may enter the corrals or directly handle the animals. The general public may not enter the corrals or directly handle the animals at anytime or for any reason during BLM operations.

H. Responsibility and Lines of Communication

Ely District

Contracting Officer's Representatives
Jared Bybee
Jody Nartz

Project Inspectors
Mike Perkins

The Contracting Officer's Representatives (CORs) and the project inspectors (PIs) have the direct responsibility to ensure the Contractor's compliance with the contract stipulations. The Ely Assistant Field Manager for Renewable Resources and the Ely Field Manager will take an active role to ensure the appropriate lines of communication are established between the field, Field Office, State Office, National Program Office, and PVC Corral offices. All employees involved in the gathering operations will keep the best interests of the animals at the forefront at all times.

All publicity, formal public contact and inquiries will be handled through the Assistant Field Manager for Renewable Resources. This individual will be the primary contact and will coordinate the contract with the PVC Corrals to ensure animals are being transported from the capture site in a safe and humane manner and are arriving in good condition.

The contract specifications require humane treatment and care of the animals during removal operations. These specifications are designed to minimize the risk of injury and death during and after capture of the animals. The specifications will be vigorously enforced.

Should the Contractor show negligence and/or not perform according to contract stipulations, he will be issued written instructions, stop work orders, or defaulted.

APPENDIX II

POPULATION MODELING

Population modeling was completed for the proposed action and the alternative. One hundred trials were ran, simulating population growth and herd demographics to determine the projected herd structure for the next four years, or prior to the next gather. The computer program used simulates the population dynamics of wild horses. It was written by Dr. Stephen H. Jenkins, Department of Biology, University of Nevada, Reno, under a contract from the National Wild Horse and Burro Program of the Bureau of Land Management and is designed for use in comparing various management strategies for wild horses.

Interpretation of the Model

The estimated population of 301 wild horses, based on a June 2003 census, was used in the population modeling. Year one is the baseline starting point for the model, and reflects wild horse numbers immediately after a gather action, or the lack of action in the case of Alternative I. In this population modeling, year one would be 2004. Year two would be exactly one year in time from the original action, and so forth for years three, four, and five. Consequently, at year five in the model, exactly four years in time would have passed. In this model, year five is 2008. This is reflected in the Population Size Modeling Table by "Population sizes in 5 years" and in the Growth Rate Modeling Table by "Average growth rate in 4 years". Growth rate is averaged over four years in time, while the population is predicted out the same four years to the end point of year five. The Full Modeling Summaries contain tables and graphs directly from the modeling program.

Population Modeling Comparison For the Alternatives

This table compares the projected population growth for the proposed action and the alternative at the end of the four-year simulation. The population averages are across all trials.

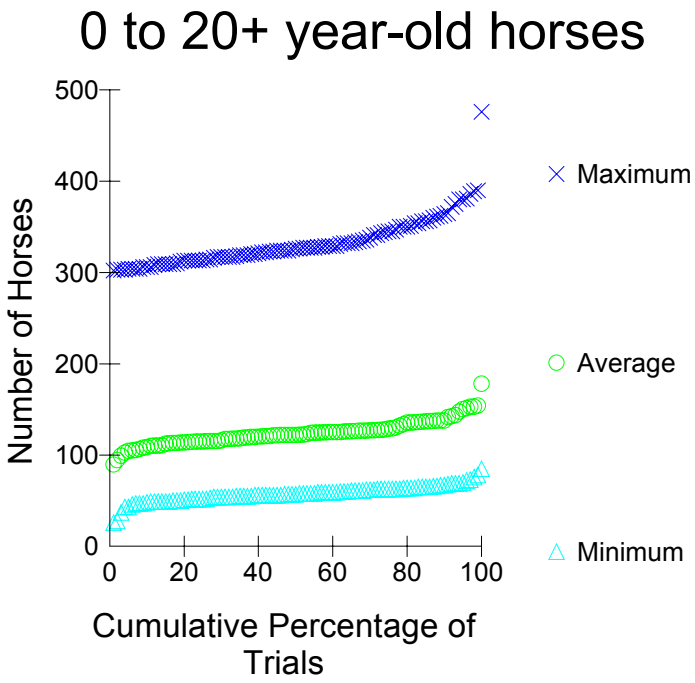
Modeling Statistic	Proposed Action	Alt. I
Population in Year One	45	301
Median Growth Rate	15.1	14.5
Average Population	122	434
Lowest Average Population	90	356
Highest Average Population	178	656

Full Modeling Summaries:

Proposed Action: Removal to AML, expect 85% capture
The parameters for the population modeling were:

1. gather when population exceeds 29 animals
2. foals are included in AML
3. percent to gather 85
4. four years between gathers
5. number of trials 100
6. number of years 4
7. initial calendar year 2004
8. initial population size 301
9. population size after gather 1 (or with only 85% caught, 45 would remain)
10. remove all wild horses caught
11. no fertility control

Population Size Modeling Table and Graph

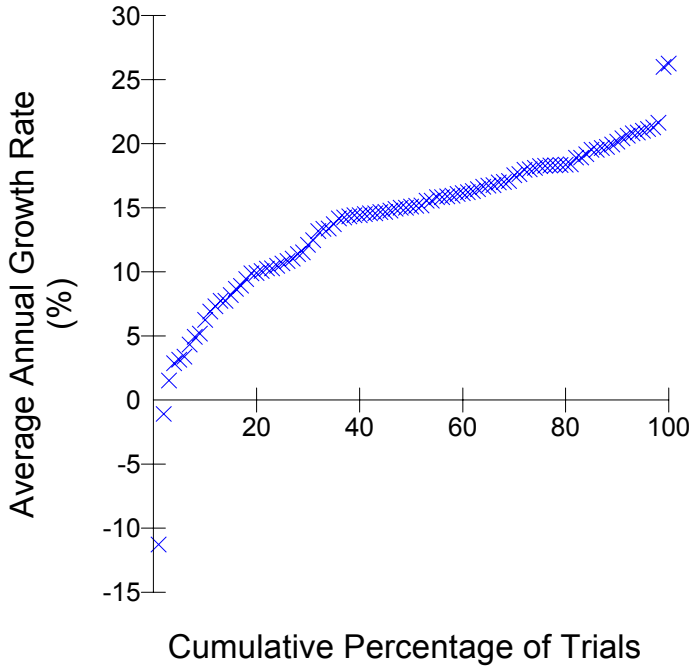


Population Sizes in 5 Years*		
		Minimum
Average	Maximum	
Lowest Trial		26
90	302	
10th Percentile		48
109	306	

25th Percentile	52	
115	314	
Median Trial	58	
122	326	
75th Percentile	63	
129	345	
90th Percentile	68	
140	364	
Highest Trial	85	
178	476	

* 0 to 20+ year-old horses

Growth Rate Modeling Table and Graph



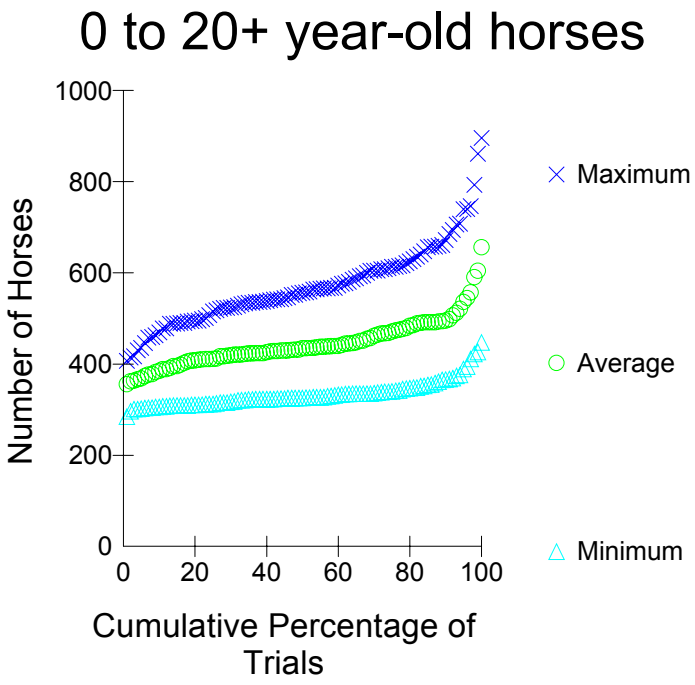
Average Growth Rate in 4 Years	Lowest Trial
-11.3	
10th Percentile	
6.6	
25th Percentile	
10.8	
Median Trial	
15.1	
75th Percentile	
18.3	
90th Percentile	
20.3	
Highest Trial	
26.3	

Alternative I: No Action

The parameters for the population modeling were:

12. do not gather
13. foals are included in AML
14. percent to gather 0
15. four years between gathers
16. number of trials 100
17. number of years 4
18. initial calendar year 2004
19. initial population size 301
20. population size after gather 301 (no gather)
21. no removals
22. no fertility control

Population Size Modeling Table and Graph

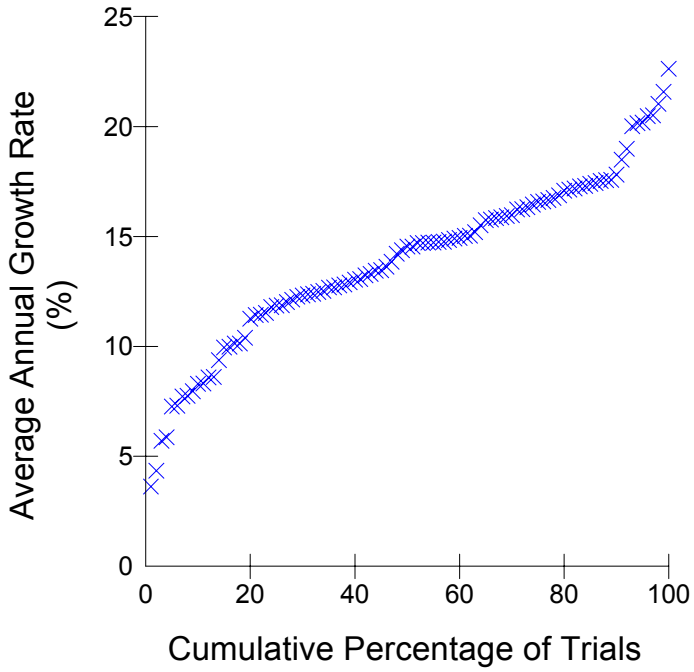


	Population Sizes in 5 Years*		
	Minimum	Average	Maximum
Lowest Trial	284	356	407
10th Percentile	306	386	474
25th Percentile	312	412	516

Median Trial	326	434	556
75th Percentile	340	472	613
90th Percentile	366	496	678
Highest Trial	447	656	896

* 0 to 20+ year-old horses

Growth Rate Modeling Table and Graph



Average Growth Rate in 4 Years
Lowest Trial
3.6
10th Percentile
8.3
25th Percentile
11.9
Median Trial
14.5
75th Percentile
16.6
90th Percentile
18.2
Highest Trial
22.6

Population Modeling for 10 Years

When population modeling was completed using a 10 year time frame, with the same management actions as the proposed action, the model showed that it would take at least two gathers to get within AML (1-29), and achieving the low end of AML would occur at the earliest in one trial during 2012, or even later in most trials.